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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**CERTIFICATE OF EXPRESS MAILING**

I hereby certify that this paper and the documents and/or fees referred to as attached therein are being deposited with the United States Postal Service on January 26, 2000 in an envelope as "Express Mail Post Office to Addressee" service under 37 CFR §1.10, Mailing Label Number EL109369436US, addressed to the Assistant Commissioner for Patents, Box Patent Application, Washington, D.C. 20231.

*Laura Blankenship*

Laura Blankenship



00/9600 U.S. PTO  
01/26/00

Attorney Docket No.: RAPTP001X1

First Named Inventor: DAGUM



**UTILITY PATENT APPLICATION TRANSMITTAL (37 CFR. § 1.53(b))**

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

Duplicate for  
fee processing

Sir: This is a request for filing a patent application under 37 CFR. § 1.53(b) in the name of inventors:  
PAUL DAGUM and THOMAS A. CHAVEZ

For: METHOD FOR OPTIMIZING A MULTIVARIATE ALLOCATION OF RESOURCES

Application Elements:

- 35 Pages of Specification, Claims and Abstract
- 12 Sheets of Informal Drawings
- 1 Sheet of Appendix
- \*\* Pages Combined Declaration and Power of Attorney

Accompanying Application Parts:

- Assignment and Assignment Recordation Cover Sheet (recording fee of \$40.00 enclosed)
- 37 CFR 3.73(b) Statement by Assignee
- Information Disclosure Statement with Form PTO-1449
  - Copies of IDS Citations
- Preliminary Amendment
- Return Receipt Postcard
- Small Entity Statement(s)
- Other:

Fee Calculation (37 CFR § 1.16)

	(Col. 1) <u>NO. FILED</u>	(Col. 2) <u>NO. EXTRA</u>	<u>SMALL ENTITY</u>	<u>OR</u>	<u>LARGE ENTITY</u>		
			<u>RATE</u>	<u>Fee</u>	<u>RATE</u>	<u>Fee</u>	
BASIC FEE			\$345	\$345	OR	\$690	\$
TOTAL CLAIMS	21	-20 =	01	x 9 = \$9	OR	x 18 = \$	
INDEP CLAIMS	03	-03 =	00	x 39 = \$	OR	x 78 = \$	
[ ] Multiple Dependent Claim Presented			\$130 = \$	OR	\$260 = \$		
* If the difference in Col. 1 is less than zero, enter "0" in Col. 2.			Total \$354	OR	Total \$		

Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ is enclosed.

The Commissioner is authorized to charge any fees beyond the amount enclosed which may be required, or to credit any overpayment, to Deposit Account No. 50-0388 (Order No. \_\_\_\_\_).

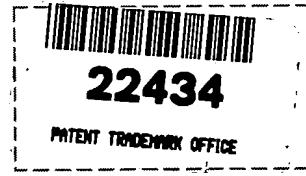
**PLEASE DO NOT CHARGE ANY FEES TO OUR DEPOSIT ACCOUNT AT THIS TIME.**

General Authorization for Petition for Extension of Time (37 CFR §1.136)

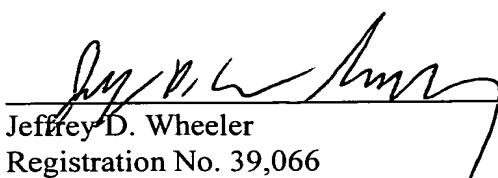
Applicants hereby make and generally authorize any Petitions for Extensions of Time as may be needed for any subsequent filings. The Commissioner is also authorized to charge any extension fees under 37 CFR §1.17 as may be needed to Deposit Account No. 50-0388 (Order No. RAPTP001X1).

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Date: January 26, 2000

  
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Appendix - Formulas (Ref. RAPT P001x1) Page 1

$$(1) \vec{x} \Rightarrow f(\vec{x}, \vec{\mu}, \epsilon)$$

$$(2) \vec{z} = T^{-1}(\vec{x} - \vec{\mu})$$

$$(3) EV() = \sum_{i=1}^N f_i(z_i) - \sum_{j=1}^m g_j(d_j)$$

$$(4) d_j = h_j(z_k)$$

$$(5) MAX F_1() = f_1(z_1) - g_1(d_1) - g_2(d_2)$$

$$(5.5) MAX F_1() = f_1(z_1) - g_1(h_1(z_1)) - g_2(h_2(z_1))$$

$$(6) MAX F_2() = f_2(z_2) - g_3(d_3)$$

$$(6.5) MAX F_2() = f_2(z_2) - g_3(h_3(z_2))$$

$$(7) f(x_1, x_2) = x_1 + x_2$$

$$(8) f(x_1, x_2) = x_1 \cdot x_2$$

$$(9) z_1 = h_1(d_2)$$

$$(10) z_2 = h_2(d_2) \Rightarrow d_2 = h_2^{-1}(z_2)$$

$$(10.5) z_1 = h_1(h_2^{-1}(z_2))$$

$$(11) F_1(z_1) = f_1(z_1) - g_1(d_1)$$

$$(12) F_2(z_2) = f_2(z_2) - g_2(d_2) - g_3(d_3)$$

$$(13) F_1 = F_1 - g_2(d_2)$$

$$(14) F_2(z_2) = f_2(z_2) - g_2(d_2)$$

$$(15) F_2 = F_2 - g_3(d_3)$$